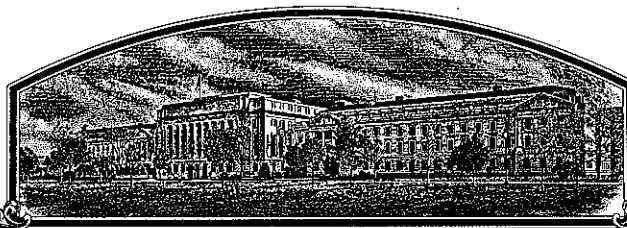


No.

8900140



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

P. Thomas Wymore

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS OF THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

BARLEY

'Bounty'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this *29th* day of *May* in the year of our Lord one thousand nine hundred and ninety-two.

Attest:

Kenneth H. Evans
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Edward M. Digian
Secretary of Agriculture



U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

FORM APPROVED: OMB NO. 0521-C055

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) Thomas Wymore		2. TEMPORARY DESIGNATION TB 79202	3. VARIETY NAME Bounty
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) Wymore Farms, N5925 Anderson Road, Glen Flora, WI 54526		5. PHONE (Include area code) 715-322-5636	FOR OFFICIAL USE ONLY VPPO NUMBER 8900140
6. GENUS AND SPECIES NAME <u>Hordeum vulgare</u> L.	7. FAMILY NAME (Botanical) Gramineae		FILING DATE <u>Apr. 3, 1989</u> TIME <u>9:30</u> <input checked="" type="checkbox"/> A.M. <input type="checkbox"/> P.M.
8. KIND NAME Barley (6-rowed)	9. DATE OF DETERMINATION December 13, 1988		FEES RECEIVED AMOUNT FOR FILING \$ <u>1800.00</u> DATE <u>Apr. 3, 1989</u> AMOUNT FOR CERTIFICATE \$ <u>200.00</u> DATE <u>April 29, 1992</u>
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.)			12. DATE OF INCORPORATION
11. IF INCORPORATED, GIVE STATE OF INCORPORATION			
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS Thomas Wymore, Wymore Farms, N5925 Anderson Road, Glen Flora, WI 54526			

PHONE (Include area code): 715-322-5636

14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED			
a. <input checked="" type="checkbox"/> Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)			
b. <input checked="" type="checkbox"/> Exhibit B, Novelty Statement.			
c. <input checked="" type="checkbox"/> Exhibit C, Objective Description of Variety (Request form from Plant Variety Protection Office.)			
d. <input checked="" type="checkbox"/> Exhibit D, Additional Description of Variety.			
e. <input checked="" type="checkbox"/> Exhibit E, Statement of the Basis of Applicant's Ownership.			
15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act.) <input checked="" type="checkbox"/> Yes (If "Yes," answer items 16 and 17 below) <input type="checkbox"/> No			
16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input checked="" type="checkbox"/> Foundation <input type="checkbox"/> Registered <input checked="" type="checkbox"/> Certified	
18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.? <input type="checkbox"/> Yes (If "Yes," give date) <input checked="" type="checkbox"/> No			
19. HAS THE VARIETY BEEN RELEASED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES? Bounty barley was tested at the University of Wisconsin. An exclusive release agreement was made between the UW Agronomy Dept. and Mr. Thomas Wymore. Mr. Wymore has sole marketing rights to Bounty. <input checked="" type="checkbox"/> Yes (If "Yes," give names of countries and dates) <input type="checkbox"/> No <u>1/1/89</u>			
20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable. The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.			

SIGNATURE OF APPLICANT <u>P. Thomas Wymore</u>	DATE <u>3/28/89</u>
SIGNATURE OF APPLICANT	DATE

Exhibit A

Origin and Breeding History of the Variety

Bounty 6-rowed spring feed barley (TB79202, PI525192)

BREEDER AND BREEDING INSTITUTION:

Leslie Shugar,
W.G. Thompson & Sons Limited,
Box 250,
BLENHEIM, Ontario.
CANADA NOP 1A0

PEDIGREE: M66102/BONANZA//JOTUN/CONQUEST/3/PERTH

BREEDING METHODOLOGY:

W.G. Thompson & Sons Limited received 25 g of an F₃ germplasm release bulk, designated #78002, in 1978 from the Crop Science Department, University of Guelph, Guelph, Ontario, Canada, of the pedigree stated above. The final cross was made in a greenhouse at Guelph in the winter of 1974-75. The bulk plot technique was used through the F₃ generation, which was grown in 1977.

Two rod rows of seed from the F₃ bulk (rising F₄) of 78002 were planted in the spring of 1978 at Thompson's Hyland Farm site in Ontario, Canada. Using the mass pedigree method, 100 heads were selected and planted in head-rows in 1979. Homogeneous Row 202 was selected in the F₅ nursery (hence TB79202), and 10 heads were picked before the row was bulk-harvested. The bulked F₆ seed was planted in a preliminary yield trial in 1980, and the 10 heads were planted in head rows to begin pure seed production. One-hundred heads were selected from the pure rows to be kept in reserve, and the remainder of the pure rows were then harvested as a single bulk and replanted in 1981 to produce bulk pre-basic seed.

TB79202 (subsequently named Bounty) was tested in Eastern Canada from 1981 to 1983 and in Western Canada from 1981 to 1985. The bulked pre-basic seed was increased in 1984 and 1985 to produce 40 bushels of breeder seed. The variety was first tested in Wisconsin in 1984 under the supervision of Dr. Marshall Brinkman, Department of Agronomy, University of Wisconsin, Madison, Wisconsin, U.S.A. It was subsequently tested in 1985, 1986 and 1987 in Wisconsin and exceeded all checks in grain yield during that three-year period.

Twenty bushels of Breeder seed of Bounty was planted in 1987 by the Wisconsin Crop Improvement Association. Marketing arrangements have been agreed upon between the Wisconsin Seed Improvement Association, Mr. Thomas Wymore of Glen Flora, Wisconsin, and W.G. Thompson & Sons Limited, Blenheim, Ontario, Canada, the original breeding institution of Bounty feed barley.

8900140

EXHIBIT A
ADDENDUM

Bounty differs from the original germplasm release (#78002) from the University of Guelph as follows:

Bounty is a homogeneous, homozygous cultivar tracing to head selections out of F_5 line TB 79202. It is uniform and stable in all respects as described elsewhere in this document. There are no variants.

The original germplasm release (#78002) was a mixed (heterogeneous, heterozygous) population of F_4 seeds from the bulk harvest of a mixed (heterogeneous, heterozygous) population of F_3 plants which, in turn, came from the bulk harvest of the F_2 population of the cross M66102/Bonanza/ / Jotun/Conquest/3/Perth.

Head selections out of the bulk F_4 population and choice of F_5 line TB79202 were based on straw strength; resistance to mildew, leaf rust, stem rust, and Helminthosporium blight; and on kernel plumpness.

Exhibit B

Novelty Statement

Bounty (TB79202, PI525192) is a six-rowed, smooth-awned, white aleurone spring feed barley that is intended for production primarily in Wisconsin and Michigan. Throughout its testing in Wisconsin yield trials its most attractive attributes were high grain yield and good resistance to powdery mildew, the principal disease of barley in Wisconsin and Michigan. Bounty and Bowers are the only Midwestern six-rowed cultivars that are resistant to powdery mildew (Table 1). Bounty is intended as a replacement for Bowers and six-rowed cultivars that are susceptible to powdery mildew in barley growing areas where powdery mildew is prevalent.

Bounty and Bowers are similar in reaction to powdery mildew and awn type, but Bounty is one to two days earlier in heading and is approximately one inch taller at maturity. Bounty and Bowers also differ noticeably in spike extrusion from the boot. Spikes of Bounty usually extrude very well from the boot, while spikes of Bowers often are not completely extruded.

Bounty's principle weakness during testing was low test weight. Bowers has also been below average in test weight, but Bounty usually is lower. Low test weight certainly is a problem when seed is sold on the cash grain market, but most of the barley that is grown in Wisconsin and Michigan is fed on the farm where it is grown. Test weight and feeding quality are not considered to be strongly correlated, especially with respect to feeding dairy cattle.

Table 1. Description of current barley cultivars in the Midwest.

Variety	Origin	Year of Release	Spike Type	Awn Type	Quality	Maturity	Height	Test Wt	Reaction to Diseases ^{1/}		
									Leaf Rust	Loose Smut	Powdery Mildew
Azure	N. Dakota	1982	6	smooth	malt	mid	med	med	S	S	S
Bounty	Canada	1988	6	smooth	feed	mid	med	low	MS	S	R
Bowers	Michigan	1979	6	smooth	feed	late	med	med	MS	S	R
Bowman	N. Dakota	1984	2	smooth	feed	early	med	high	S	S	MR
Chopper	Wisconsin	1988	2	rough	feed	late	med	high	R	S	VR
Glenn	N. Dakota	1978	6	rough	malt	early	med	med	S	S	S
Hazen	N. Dakota	1984	6	smooth	feed	mid	med	med	S	S	I
Morex	Minnesota	1978	6	smooth	malt	early	med	med	S	S	S
Robust	Minnesota	1983	6	smooth	malt	mid	med	high	S	S	S

^{1/} VR = very resistant, R = resistant, MR = moderately resistant, I = intermediate, MS = moderately susceptible, and S = susceptible.

EXHIBIT B
ADDENDUM

NOVELTY OF BOUNTY BARLEY

Over all traits, Bounty is most similar to Robust. Bounty differs from Robust in resistance to mildew (Bounty is resistant, Robust is susceptible; Table 2, Exhibit D); and in degree of resistance to leaf rust (Bounty is intermediate in reaction compared to the susceptible reaction of Robust; Table 2, Exhibit D). Bounty especially differs from Robust and other malting barley cultivars by being extremely low in Diastatic Power as illustrated below.

Diastatic Power refers to the amount of diastase (starch splitting enzymes) available to convert large quantities of starches of other grains to fermentable forms of sugars by the malt from a specific barley variety. Diastatic Power must be high to meet malting quality standards.

The data in Table 1A reveal that in from six to ten tests conducted in six different years in Wisconsin, Bounty always had lower Diastatic Power values than Morex, Robust, Hazel, Chilton, or Excel. Mean values for Bounty ranged from 36 to 72 points lower than the mean values for the other cultivars. Hence Bounty could be differentiated from Robust, and from other malting barley varieties, by Bounty's low Diastatic Power.

8900140

EXHIBIT B
ADDENDUM

Table 1A. Diastatic Power values for six barley cultivars grown in 11 tests in six different years in Wisconsin.

CROP YEAR	CULTIVAR					
	BOUNTY	MOREX	ROBUST	HAZEL	CHILTON	EXCEL
-----Diastatic Power-----						
1984 Chilton	108	167	144	146	-	-
1985 RRYT-Mad.	71	143	141	137	136	-
1986	-	-	-	-	-	-
1987 RRYT-Arl.	104	141	128	123	164	-
ADP	98	163	117	98	183	-
1988 RRYT-Mad.	112	229	173	199	250	194
ADP	110	155	152	153	219	155
1989 RRYT-Mad.	-	-	-	-	-	-
ADP	82	120	90	114	136	99
1990 RRYT-Mad.	58	128	120	81	102	117
ADP	72	115	105	106	124	104
Trips	78	141	116	99	114	99
n=10	89.3	150.2	128.6	125.6	-	-
n= 9	87.2	148.3	126.9	123.3	158.7	-
n= 6	85.3	148.0	126.0	125.3	157.5	128.0

n= 6	-	+62.7	+40.7	+40.0	+72.2	+42.7
n= 9	-	+61.1	+39.7	+36.1	+71.5	-
n=10	-	+60.9	+39.3	+36.3	-	-

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK AND SEED DIVISION
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Barley)

OBJECTIVE DESCRIPTION OF VARIETY
BARLEY (*HORDEUM VULGARE*)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)

Thomas Wymore

ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)

Wymore Farms, N5925 Anderson Road,
Glen Flora, WI 54526

FOR OFFICIAL USE ONLY

PVPO NUMBER

VARIETY NAME OR TEMPORARY DESIGNATION

8900140

BOUNTY

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (i.e. or) when number is either 99 or less or 9 or less.

1. GROWTH HABIT:

1 = SPRING 2 = FACULTATIVE WINTER 3 = WINTER Early Growth: 1 = PROSTRATE 2 = SEMIPROSTRATE 3 = ERECT

2. MATURITY (50% Flowering):

1 = EARLY (California Mariout) 2 = MIDSEASON (Betzes) 3 = LATE (Frontier)

No. of days Earlier than } 1 = BETZES 2 = CALIFORNIA MARIOUT 3 = CONQUEST 4 = DICKSON
2 days later
 than Glenn
 No. of days Later than } 5 = PIROLINE 6 = PRIMUS 7 = UNITAN 8 = Robust

3. PLANT HEIGHT (From soil level to top of head):

1 = SEMIDWARF 2 = SHORT (California Mariout) 3 = MEDIUM TALL (Betzes) 4 = TALL (Conquest)

Cm. Shorter than } 1 = BETZES 2 = CALIFORNIA MARIOUT 3 = CONQUEST 4 = DICKSON
 Cm. Taller than } 5 = PIROLINE 6 = PRIMUS 7 = UNITAN 8 = Robust

4. STEM:

Exertion (Flag to spike at maturity): 1 = 0 - 3 cm. 2 = 3 - 10 cm. Anthocyanin: 1 = ABSENT 2 = PRESENT
3 = 10 - 15 cm.

5. NO. OF NODES (Originating from node above ground)

Collar Shape: 1 = CLOSED 2 = V-SHAPED 3 = OPEN Shape of Neck: 1 = STRAIGHT 2 = SNAKY
4 = MODIFIED CLOSED OR OPEN 3 = OTHER (Specify)

5. LEAF:

Basal leaf sheath (seedling): 1 = GLABROUS 2 = PUBESCENT Position of flag leaf (at boot stage): 1 = DROOPING
2 = UPRIGHT

Waxiness: 1 = ABSENT (Glossy) 2 = SLIGHTLY WAXY MM. WIDTH (First leaf below flag leaf)

CM. LENGTH (First leaf below flag leaf) Anthocyanin in leaf sheath: 1 = ABSENT 2 = PRESENT

6. HEAD:

Type: 1 = TWO-ROWED 2 = SIX-ROWED Density: 1 = LAX 2 = ERECT (Not dense)
3 = ERECT (Dense)

Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE Waxiness: 1 = ABSENT (Glossy) 2 = SLIGHTLY WAXY
4 = OTHER (Specify) Parallel along sides tapering at tip and base 3 = WAXY

Lateral Kernels Overlap: 1 = NONE 2 = AT TIP 3 = 1/4 - 1/2 OF HEAD Rachis (Hair on edge): 1 = LACKING 2 = FEW 3 = COVERED

7. GLUME:

Length: 1 = 1/3 OF LEMMA 2 = 1/2 OF LEMMA Hairs: 1 = NONE 2 = SHORT 3 = LONG
3 = MORE THAN 1/2 OF LEMMA

Hair covering: 1 = NONE 2 = RESTRICTED TO MIDDLE 3 = CONFINED TO BAND 4 = COMPLETELY COVERED

Awns: 1 = LESS THAN EQUAL TO LENGTH OF GLUMES 2 = EQUAL TO LENGTH OF GLUMES
3 = MORE THAN EQUAL TO LENGTH OF GLUMES

Awn Surface: 1 = SMOOTH 2 = SEMISMOOTH 3 = ROUGH

8. LEMMA:

- ☐ 5 Awn: 1 = AWNLESS 2 = AWNLETS ON CENTRAL ROWS AWNLESS ON LATERAL ROWS
 3 = SHORT ON CENTRAL ROWS, AWNLETS ON LATERAL ROWS 4 = SHORT (less than equal to length of spike)
 5 = LONG (longer than spike) 6 = HOODED
- ☐ 2 Awn Surface: 1 = AWNLESS 2 = SMOOTH 3 = SEMISMOOTH 4 = ROUGH
- ☐ 1 Teeth: 1 = ABSENT 2 = FEW 3 = NUMEROUS ☐ 1 Hair: 1 = ABSENT 2 = PRESENT
- ☐ 1 Shape of base: 1 = DEPRESSION 2 = SLIGHT CREASE
 3 = TRANSVERSE CREASE ☐ 2 Rachilla Hairs: 1 = SHORT 2 = LONG

9. STIGMA:

- ☐ 2 Hairs: 1 = FEW 2 = MANY

10. SEED:

- ☐ 2 Type: 1 = NAKED 2 = COVERED ☐ 1 Hairs on Ventral Furrow: 1 = ABSENT 2 = PRESENT
- ☐ 4 Length: 1 = SHORT (8.0 mm.) 2 = SHORT TO MIDLONG (7.5 - 9.0 mm.) 3 = MIDLONG (8.5 - 9.5 mm.)
 4 = MIDLONG TO LONG (9.0 - 10.5 mm.) 5 = LONG (10.0 mm.)
- ☐ 2 Wrinkling of hull: 1 = NAKED 2 = SLIGHTLY WRINKLED 3 = SEMIWRINKLED 4 = WRINKLED
- ☐ 1 Aleurone Color: 1 = COLORLESS (White or Yellow) 2 = BLUE
- ☐ 0 8. PERCENT ABORTIVE ☐ 3 ☐ 1 GMS. PER 1000 SEEDS

11. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

- ☐ 0 SEPTORIA ☐ 0 NET BLOTCH ☐ 2 SPOT BLOTCH ☐ 2 POWDERY MILDEW
- ☐ 0 LOOSE SMUT ☐ 0 BACTERIAL BLIGHT ☐ 0 COVERED SMUT ☐ 0 FALSE LOOSE SMUT
- ☐ 2 STEM RUST ☐ 1 LEAF RUST ☐ 0 SCAB ☐ 2 SCALD
- ☐ 0 AY ☐ 0 BSMV ☐ 2 BYDV ☐ OTHER (Specify)

12. INSECT: (0 = Not tested, 1 = Susceptible, 2 = Resistant)

- ☐ 0 GREEN BUG ☐ 0 ENGLISH GRAIN APHID ☐ 0 CHINCH BUG ☐ 0 ARMYWORM
- ☐ 0 GRASS HOPPERS ☐ 0 CERIAL LEAF BETTLE ☐ OTHER (Specify)
- HESSIAN FLY RACES { ☐ 0 GP ☐ 0 A ☐ 0 B ☐ 0 C
☐ 0 D ☐ 0 E ☐ 0 F ☐ 0 G

13. CHEMICAL (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

- ☐ 0 DDT ☐ OTHER (Specify)

14. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Hazen	Seed size (ker wt)	Morex
Leaf size	Robust	Coleoptile elongation	
Leaf color	Hazen	Seedling pigmentation	
Leaf carriage	Robust		

REFERENCES: The following publications may be used as a reference aid for the standardization of character descriptions and terms used in this form:

1. Wiebe, G. A., and D. A. Reid, 1961, Classification of Barley Varieties Grown in the United States and Canada in 1958, Technical Bulletin No. 1224, U.S. Dept. of Agriculture.
2. Reid, D. A., and G. A. Wiebe, 1968, Barley: Origin, Botany, Culture, Winter Hardiness, Genetics, Utilization, Pests, Agriculture Handbook No. 338, U.S. Dept. of Agriculture. pp. 61 - 84.
3. Malting Barley Improvement Association, Milwaukee, Wisconsin, 1971, Barley Variety Dictionary.

COLOR: Nickerson's or any recognized color fan may be used to determine color of the described variety.

Exhibit D

Additional Description of the Variety

Bounty barley is a six-rowed, smooth-awned, white aleurone cultivar with medium long to long rachilla hairs. The hull is slightly wrinkled. It has good resistance to powdery mildew, and is also resistant to stem rust and spot blotch. These latter two diseases rarely cause problems in barley fields in Wisconsin and Michigan.

The performance of Bounty in Wisconsin yield trials during the 1985-87 growing seasons is summarized in Tables 2, 3, 4, and 5. Bounty is midseason in maturity, has slightly greater than average height, and has average straw stiffness.

Table 2. Performance of 22 barleys at Madison, Ashland, Chilton, Lancaster, and Marshfield, Wisconsin in 1985.

Entry	Grain yield		Bushe ^l weight	Head date	Ht.	Lodging	Agtron	Mildew ^{1/}	Leaf ^{1/} rust
	bu/a	rank	lbs.	June	in.	%	0-100	%	%
Bowers	49.1	17	46.2	19.4	33.0	48	32	5	40
Glenn	47.4	21	45.0	15.4	32.6	24	44	70	60
Hazen	51.7	12	46.7	17.9	33.0	22	49	45	60
Morex	53.0	8	46.9	16.0	34.5	33	41	80	60
Robust	53.2	7	49.2	18.3	33.7	39	41	30	70
Busch 2	48.5	19	45.3	14.6	33.9	38	43	40	65
Minn M46	53.3	6	47.5	18.6	32.6	24	40	60	80
Bounty	58.3	2	46.4	16.4	34.2	33	38	10	40
TB82092	56.5	4	47.2	19.8	35.0	33	39	0	15
X2372-1	52.2	11	49.4	15.9	31.9	27	45	50	70
X2483-2-2	51.2	13	46.2	20.3	36.7	38	45	40	40
X2665-1	48.6	18	47.7	16.4	33.6	27	47	60	60
X2672-2	52.6	10	46.8	17.6	34.3	30	46	60	25
X2672-3	50.6	15	47.1	16.7	34.5	43	41	75	20
X2674-4	53.0	9	46.9	17.0	32.6	39	45	15	75
X2705-4	45.1	22	46.2	17.9	34.3	39	43	70	50
X2705-7	55.3	5	46.9	17.6	35.5	28	41	90	40
X2705-8	48.3	20	46.5	18.6	33.8	27	44	90	40
X2860-2	57.4	3	50.8	20.6	31.8	10	34	5	8
Chopper	59.0	1	51.4	20.0	31.7	6	34	2	5
X2911-2	50.9	14	47.4	19.6	34.0	26	46	25	20
X2911-4	49.8	16	47.8	19.7	33.2	11	44	70	15
Mean	52.1		47.4	17.9	33.7	29	40	45	44
Locations	5		5	4	5	2	4	1	1

^{1/} Disease reactions were obtained from a late-planted nursery at Arlington, Wisconsin.

Table 3. Performance of 24 barleys at Ashland, Chilton, Lancaster, and Marshfield in 1986.

Genotype	Grain Yield	Bushel Weight	Head Date	Height	Lodging
	bu/a	lb/bu	June	in	%
Bowers	67.9	45.1	17.7	29.9	43
Bowman	64.6	49.0	15.1	28.2	59
Glenn	61.9	45.2	14.0	30.6	43
Hazen	68.1	46.6	15.9	31.2	53
Morex	60.9	44.8	15.6	32.4	45
Robust	68.4	46.8	16.9	31.3	36
Minn M47	67.7	47.0	16.1	28.8	36
ND7309	56.7	43.0	16.4	30.5	44
Bounty	69.6	44.9	17.1	31.2	48
TB82092	62.9	45.0	17.6	31.6	40
X2665-1	57.2	45.7	15.1	31.7	54
X2672-2	64.4	45.2	15.6	32.2	40
X2674-4	57.5	45.2	15.4	30.9	42
X2705-3	61.7	45.7	16.0	30.8	44
X2705-7	60.1	45.4	16.2	31.6	42
X2860-2	57.7	48.8	18.6	29.6	48
Chopper	62.2	48.6	18.6	29.3	52
X2911-2	63.9	46.5	17.1	30.1	38
X2911-8	64.4	46.5	17.4	31.2	40
X2944-4	62.7	47.2	14.1	33.1	39
X2944-16	62.9	46.3	14.4	32.2	46
X2945-4	64.0	46.4	16.5	30.8	43
X2968-3	64.8	46.9	14.6	31.9	40
X2968-4	61.0	46.4	13.5	31.1	37
Mean	63.1	46.2	16.1	31.0	44
Locations	4	4	2	4	1

Table 4. Performance of 20 barleys at Arlington, Ashland, Chilton, Lancaster, and Marshfield in 1987.

Variety or selection	Grain yield		Test weight		Head date	Height	Ripe date	Lodging	Protein
	bu/a	rank	lb/bu	rank	June	in	July	%	%
No. loc.	5		5		4	4	1	2	1
Azure	56.2	3	44.4	16	12.4	28.1	23.5	35	14.0
Bounty	54.7	7	44.0	20	12.7	27.9	25.0	31	13.6
Bowers	56.0	4	44.4	16	12.8	27.5	25.2	24	13.7
Bowman (2R)	55.7	5	48.0	1	11.1	26.0	24.2	24	15.6
Chopper (2R)	53.7	10	47.1	2	13.6	26.9	29.7	48	14.6
Glenn	51.5	14	44.2	18	10.2	27.3	25.8	10	14.9
Hazen	57.5	1	45.0	10	11.8	27.1	26.7	22	13.9
Morex	53.9	9	44.6	15	9.8	28.2	22.0	39	14.5
Robust	53.0	12	45.9	6	11.8	22.7	25.0	14	13.4
Minn M47	50.7	15	45.8	7	11.4	26.3	28.3	16	14.6
X2672-2	52.4	13	44.9	12	11.4	28.8	27.0	19	14.4
X2705-3	49.0	19	45.2	8	11.4	28.3	25.2	11	15.2
X2860-2 (2R)	56.7	2	45.9	4	13.3	27.6	25.8	54	14.5
X2911-2	49.8	17	44.7	14	12.1	28.9	27.2	11	14.5
X2911-8	47.1	20	45.0	11	12.6	27.7	26.7	16	14.1
X2944-4	54.6	8	46.5	3	10.3	28.6	24.8	17	15.3
X2944-16	55.0	6	45.9	4	10.8	28.3	26.0	12	14.6
X2945-4	49.9	16	44.2	18	12.6	26.8	28.5	16	14.4
X2968-3	53.2	11	44.9	12	11.6	27.1	28.8	6	14.5
X2968-4	49.3	18	45.2	8	10.5	26.5	26.0	9	15.0
Average	53.0		45.3		11.7	27.6	26.1	22	14.7

Table 5. Performance of seven barley cultivars grown in Wisconsin yield trials, 1985-87.

Cultivar	Grain yield bu/a	Test wt lb	Head date June	Height in	Lodging %	Grain protein %
Bounty	60.8	44.1	14.4	31.4	30	10.0
Bowers	57.1	44.9	15.6	30.3	32	11.1
Chopper (2R)	59.4	48.4	16.5	29.4	26	10.7
Glenn	53.5	44.4	12.4	30.2	21	12.0
Hazen	59.2	45.4	14.3	30.5	24	11.7
Morex	56.3	45.1	12.7	31.8	34	10.2
Robust	57.2	46.7	14.7	31.0	25	10.2
Average	57.6	45.6	14.4	30.7	27	10.8
No. tests	18	17	11	16	7	2

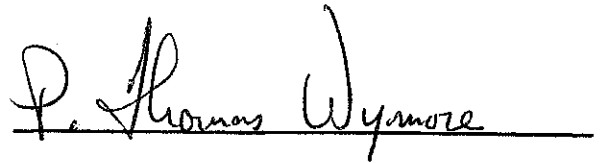
Exhibit E

Statement of the Basis of Applicant's Ownership

This is to certify that we are the sole owners and applicants for PVP for Bounty barley.



Cheryl L. Wymore



P. Thomas Wymore

N 5925 Anderson Road
Glen Flora, Wisconsin 54526



A DIVISION OF

W.G. THOMPSON & SONS LIMITED

September 14, 1989.

W.G. THOMPSON & SONS LIMITED of BLENHEIM, Ontario, Canada,
the developer of BOUNTY SPRING BARLEY hereby transfers ownership of the
BOUNTY SPRING BARLEY VARIETY to P. THOMAS and CHERYL L. WYMORE, R.R.#1,
GLEN FLORA, WISCONSIN, USA.

Duly signed:

DONALD A. LITTLEJOHNS,
RESEARCH DIRECTOR.

DAL/jr